Statement of
Richard Mather Russell
before the
Committee on Commerce, Science, and Transportation
United States Senate
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Washington, D.C.

It is a great honor and privilege to come before you as President Bush's nominee for Associate Director for the Office of Science and Technology Policy (OSTP). If confirmed, I will serve as OSTP's Associate Director for Technology and will work along side my fellow nominee and colleague, Dr. Kathie Olsen, who will be responsible for OSTP's science division.

As part of the Executive Office of the President (EOP), OSTP plays a critical role in advising the White House on the development and use of technology in the United States. If I am confirmed, I look forward to working with this Committee and Congress on issues ranging from nanotechnology to computer security.

Under the leadership of OSTP Director John Marburger, the office has been realigned to eliminate stovepipes and to allow for the seamless sharing of insights and information among all of OSTP's staff. This goal has been achieved by reducing the number of associate directors from four to two and by establishing an office structure that avoids drawing bright lines between science and technology.

Under the new structure, OSTP will have an associate director for each of its two principal components: science and technology. The associate directors will answer to the director and will have specific line authority over the departments that fall primarily within their issue areas.

If confirmed, I will be charged with the technology portfolio that includes three departments: Technology; Telecommunications and Information Technology; and Space and Aeronautics. Dr. Olsen will be assigned the science portfolio that includes Environment; Life Sciences; Physical Sciences and Engineering; and Education and Social Sciences. In addition, OSTP, through a joint arrangement with the Office of Homeland Security, has a department of Homeland and National Security. That department has been operating effectively under the direct supervision of Dr. Marburger. The department will continue to answer to Dr. Marburger through OSTP's chief of staff.

While each of the associate directors has responsibility for specific departments, we recognize that most important policy issues before OSTP have both a scientific and a technical component. The office has been structured, therefore, so that either associate director can tap into the expertise of any of the departments. For issues of particular significance, both associate directors will be heavily engaged, as will the chief of staff. In each instance, one of the associate directors will be designated the lead.

Let me give you two examples. Nanotechnology is a priority for the Bush Administration and OSTP. This program has components of both basic scientific research and applied technology research and development. If confirmed, I will have the lead on nanotechnology policy, but, because of its significant scientific component, the Physical Science and Engineering department will be heavily engaged, as well. The science and technology associate directors will jointly chair the National Science and Technology Council (NSTC) committee responsible for interagency coordination of nanotechnology.

Homeland security technology provides another good example. OSTP is assisting the Office of Homeland Security in coordinating plans to deploy new technologies at our nation's borders to help ensure that we positively identify visitors to our country and determine if they have overstayed their visas. This goal presents many challenging technology development and deployment issues. While the department of Homeland and National Security has the lead on this matter, OSTP's department of Technology has been directly engaged on the issue. If confirmed, I will consider technology deployment at our borders a personal priority.

The importance of technology and science policy to the economy led Dr. Marburger to conclude that OSTP should be linked to the National Economic Council (NEC). The associate director for technology will fulfill this coordination role with the NEC.

One cannot overstate the importance of science and technology policy to the economy. Scientific and technical advances have driven our country's prosperity since the birth of our great nation. Every child is aware of the fascination that many of our founding fathers held for the process of discovery. In 1778, Benjamin Franklin stated, "Man is a tool-making animal." The statement seems a perfect summation of his personal drive to innovate. It is a drive shared by many great Americans throughout our history.

From the Franklin stove to the Internet, American inventors have produced a seemingly endless array of revolutionary tools. Such tools have enabled us to win wars, advance freedom and democracy, cure disease, reduce hunger, travel further and faster, and share virtually limitless amounts of information around the world at the speed of light.

Technological advancements in the fields of medicine and agriculture have contributed substantially to our nation's wealth and well-being. In agriculture, biotechnology has enabled crop yields to increase while reducing the need for pesticides and water, simultaneously helping the economy and the environment. Agricultural biotechnology is a key element in the effort to address world hunger. The development of golden rice promises to prevent millions of cases of childhood blindness and needless deaths in developing nations. Similarly, advances in biomedical technologies have increased the quality and length of our lives.

Technology development and deployment will prove key to our nation's efforts to secure the homeland. It will help improve security while enabling the continued flow of people and goods across our borders. Technology development and deployment will help secure our critical infrastructures and will help us

recover from any future attack.

The fall in the NASDAQ from its peak in March of 2000 does not diminish the fact that technology is having a substantial, positive effect on U.S. productivity and the economy.

The U.S. remains the leading innovator in the world. This year patent filings are expected to total 340,000, a 70% increase from 1996.[1] In the last decade, U.S. production of computer and office equipment has increased 12-fold and semiconductor and related electronic components has increased by a factor of 20.[2] Further, U.S. exports of aerospace technologies, electronics, biotechnologies, and software account for almost 30% of U.S. exports.[3]

As President George W. Bush stated last month during the presentation of the National Medals of Science and Technology:

> "We'll continue to support science and technology because innovation makes America stronger. Innovation helps Americans to live longer, healthier and happier lives. Innovation helps our economy grow, and helps people find work. Innovation strengthens our national defense and our homeland security, and we need a strong national defense and homeland security as we fight people who hate America because we're free."

While the U.S. remains the global leader in innovation, we cannot rest on our laurels. U.S. exports of technology have increased substantially over the last ten years, but imports have grown even faster. That is why it is critical that we not only maintain but also enhance our nation's ability to innovate.

OSTP plays a key role in promoting innovation. Through the NSTC, OSTP coordinates government-wide science and technology initiatives such as the Networking and Information Research and Development (NITRD) program and the National Nanotechnology Initiative (NNI). OSTP supports important Presidential advisory panels such as the President's Council of Advisors on Science and Technology (PCAST) and the Congressionally chartered Commission on the Future of the U.S. Aerospace Industry.

I have spent almost a decade and a half working on matters of science and technology policy. Working in the House and Senate, on two Congressional Committees, and as the former chief of staff of OSTP, I have had the opportunity to work on a broad range of issues critical to technology policy – ranging from computer security to standard setting, modernization of the air traffic control system, and

[1] Patent and Trademark Office, Department of Commerce.

[2] Federal Reserve Board, April 1992 to April 2002 comparison.

[3] 29% in 1999, *Science & Engineering Indicators 2002*, National Science Foundation.

information technology research and development.

If confirmed, I look forward to working with Dr. Marburger, Congress, in particular this committee, and the Administration as a whole in promoting science and math education, prioritizing critical research endeavors such as NNI and NITRD, supporting sound research and development budgets, and championing important policy initiatives such as making the research and experimentation tax credit permanent.

In addition, I will take a strong personal interest in policies that will help expedite the development and deployment of broadband technologies. As the President stated on June 13, 2002, "This country must be aggressive about the expansion of broadband." The President has championed important economic policies, such as accelerated tax depreciation schedules, the moratorium on new access fees on the Internet, and research on networking and computer security. The President has tasked PCAST to recommend policies that will promote the adoption of broadband technologies. If confirmed, I look forward to working with PCAST and the rest of the Administration to advance the President's stated objective.

With the Committee's support, and that of the full Senate, I look forward to the opportunity to work for OSTP.